DC UPS

On the pages 230 to 251 you can find a variety of DC UPS and battery packs.

You did not find what you were looking for? Please do not hesitate to contact us! Our product range of standard models as well as special editions offers much more. ☎ +49 (0) 906 70595-0

UPSI-2402-IP	120 W	24 V DC	Outdoor UPS	230
UPSI-2401	120 W	24 V DC	106 x 123 x 129 mm	232
UPSI-1202	72 W	12 V DC	100 x 120 x 23 mm	234
UPSI-2402	120 W	24 V DC	100 x 120 x 23 mm	236
BP-0625	2.5 Ah	6 V DC	CYCLON battery	238
BP-1225	2.5 Ah	12 V DC	CYCLON battery	239
UPSI-B-2405	120 W	24 V DC	100 x 68 x 40 mm	240
BP-2412A	1.2 Ah	24 V DC	Maintenance-free lead battery	242
BP-2425-05	2.5 Ah	24 V DC	CYCLON battery	243
UPSI-B-2410	240 W	24 V DC	182 x 102 x 73 mm	244
BP-2425C	2.5 Ah	24 V DC	CYCLON battery	246
BP-2425	2.5 Ah	24 V DC	CYCLON battery	247
UPSI-B-2440	960 W	24 V DC	253 x 104 x 75 mm	248
BP-2450C	5 Ah	24 V DC	CYCLON battery	250
RUPS 2000 OEM	UPS Management Software			251

UPSI-2402-IP

24 V DC / 5 A

- **Outdoor UPS**
- **Protection class IP67**
- **Robust aluminium casing**

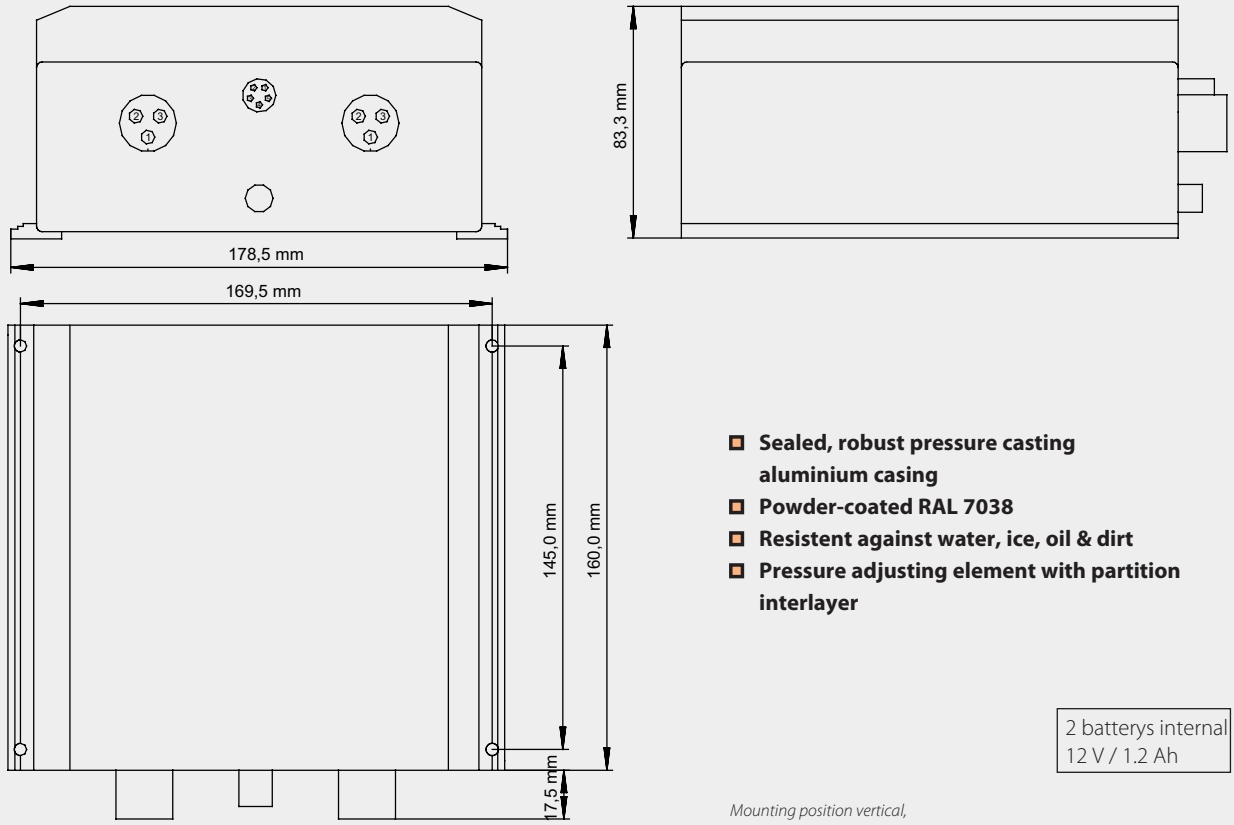
The new DC-UPS UPSI-2402-IP has been designed for outside use. The robust casing protects electronic parts according to protection class IP67 against intrusion of water, dust and dirt. The µC-controlled DC-UPS is provides with various protective functions and a battery control. In case of a supply voltage failure, the battery-capacity is sufficient to ensure the necessary supply to the user. Additionally, the UPSI-2402-IP is equipped with a load sensor and a timer function.

Technical data

Input voltage	24 V DC (22.5…30 V)
Input current	5.5 A max.
Output voltage	In normal mode: app. 0.5 V below input voltage In battery mode: app. 29…19 V DC
Output current	5 A max.
Battery charge current	0.4 A max. (internal battery charger)
Charging method	UI characteristic, with temperature regulation
Protection	Deep discharge protection: 19 V DC ±2 % Overload protection at output: 10 A for 2 seconds, switch off Short-circuit protection: Switch off
Transfer time / limits	Mains / battery 20 V DC ±2 %, Battery / mains 22 V DC ±2 %
Interface	DSUB9 connector, female (at interface cable) Outputs: Power Fail, Battery Low Input: Shutdown Optionally also available with UPS software for connection to common operating systems
Type of battery	Equipped lead-gel-battery, maintenance-free, 1.2 Ah
Safety / EMC	CE
Operating temperature	0…+40 °C
Storage temperature	-10…+40 °C
Storage humidity	0…95 % RH, non-condensing
Dimensions	160 x 185 x 85 ±0.5 mm
Weight (net)	2.7 kg

Product specific data	
Battery monitoring	Battery test is carried out in normal mode approx every 10 minutes (optional sginaling contact)
Power consumption	App. 50 mA
Shutdown suppression	During system start-up the shutdown signal is suppressed for app. 2 minutes.
Reboot function	If power fails and then returns during the shutdown mode of Windows®, the operating system will ‚lock' with the message „Your PC is now safe". The reboot function restarts the system after about 10 seconds.
Load sensor	Switch-off in UPS mode <10 Watt
Timer function	2 min – 6 min – 20 min – off, adjustable via DIP switch
Back up time	App. 30 min at 1 A / app. 8 min at 3 A / app. 3 min at 5 A (measured at +20 °C)

Drawing UPSI-2402-IP



- **Sealed, robust pressure casting aluminium casing**
- **Powder-coated RAL 7038**
- **Resistent against water, ice, oil & dirt**
- **Pressure adjusting element with partition interlayer**

2 batterys internal
12 V / 1.2 Ah

Mounting position vertical, connection down

Tolerance ±0.5 mm

Connection

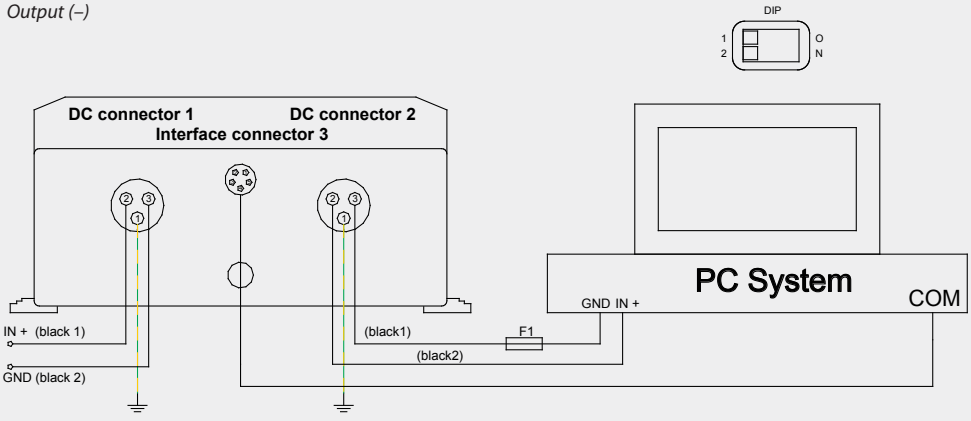
DC connector 1
1 GND
2 Input (+)
3 Input (–)

DC connector 2
1 GND
2 Output (+)
3 Output (–)

Interface connector 3
1 Batterie low output
2 Shutdown input
3 Power Fail output
4 n.c.
5 GND

Timer function (internal)

Timer	off	2 min.	6 min.	20 min.
S1	off	on	off	on
S2	off	off	on	on



Accessories *(included in delivery)*

Input / Output cable (open end), length 2 m
Interface cable (DSUB 9), length 2 m

Optional accessories

Article No.	Description
RUPS2000-B1	UPS Management Software (CD-ROM)

UPSI-2401

24 V DC / 5 A

- **Continuous battery monitoring**
- **Timer function**
- **PC interface**

The newly designed DC UPS UPSI-2401 protects connected consumer loads from supply voltage fluctuations and interruptions. The µC controlled DC UPS provides various protections. Among the most important is the continuous battery monitoring feature. This ensures that sufficient capacitance remains in the battery to guarantee the supply of consumer loads in case of power failure. New features of the UPSI-2401 are a load sensor and a timer function. The timer function was integrated and allows a timer-controlled switch-off of the UPS.

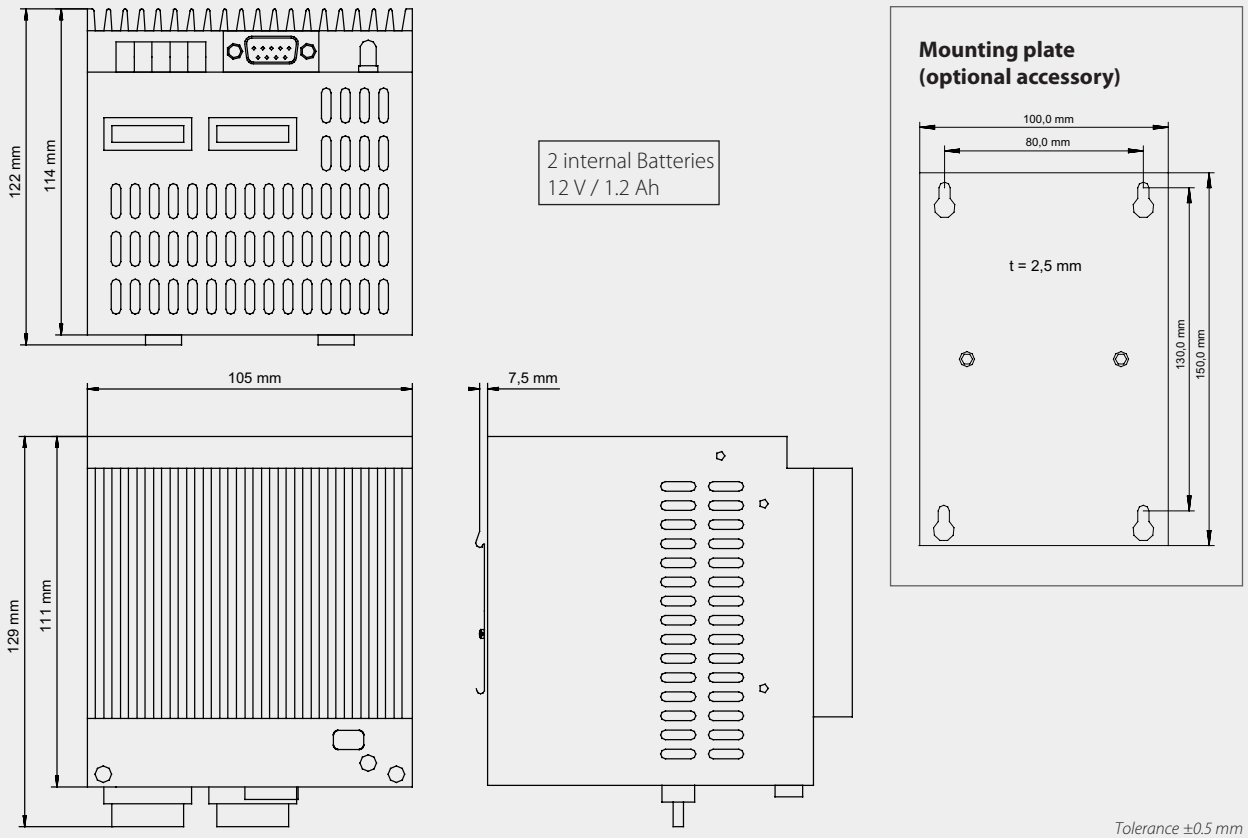
Technical data

Input voltage	24 V DC (22.5…30 V)
Input current	5.5 A max.
Output voltage	In normal mode: app. 0.5 V below input voltage In battery mode: app. 27…19 V DC
Output current	5 A max.
Battery charge current	0.4 A max. (internal battery charger)
Charging method	UI characteristic, with temperature regulation
Protection	Deep discharge protection: 19 V DC ±2 % Overload protection at output: 10 A for 2 seconds, switch off Short-circuit protection: Switch off
Transfer time / limits	Mains / battery 20 V DC ±2 %, Battery / mains 22 V DC ±2 %
Interface	DSUB9 connector, female Outputs: Power Fail, Battery Low Input: Shutdown Optionally also available with UPS software for connection to common operating systems
Type of battery	Equipped lead-gel-battery, maintenance-free, 1.2 Ah
Safety / EMC	CE
Operating temperature	0…+40 °C
Storage temperature	-10…+40 °C
Storage humidity	0…95 % RH, non-condensing
Dimensions	106 x 123 x 129 ±0.5 mm
Weight (net)	2 kg

Product specific data

LED display	3-colour-LED for „Power ok" (green), „Power Fail" (orange), „Battery low" (red/orange flashing) and „Battery defect" (red/green flashing), short circuit at output/overload (red)
Battery monitoring	Battery test is carried out in normal mode approx every 10 minutes, in case of "Battery defect" notification the LED flashes red/green (optional sginaling contact)
Power consumption	App. 50 mA
Shutdown suppression	During system start-up the shutdown signal is suppressed for app. 2 minutes.
Reboot function	If power fails and then returns during the shutdown mode of Windows®, the operating system will ‚lock' with the message „Your PC is now safe". The reboot function restarts the system after about 10 seconds.
Load sensor	Switch-off in UPS mode <10 Watt
Timer function	2 min – 6 min – 20 min – off, adjustable via DIP switch
Back up time	App. 30 min at 1 A / app. 8 min at 3 A / app. 3 min at 5 A (measured at +20 °C)

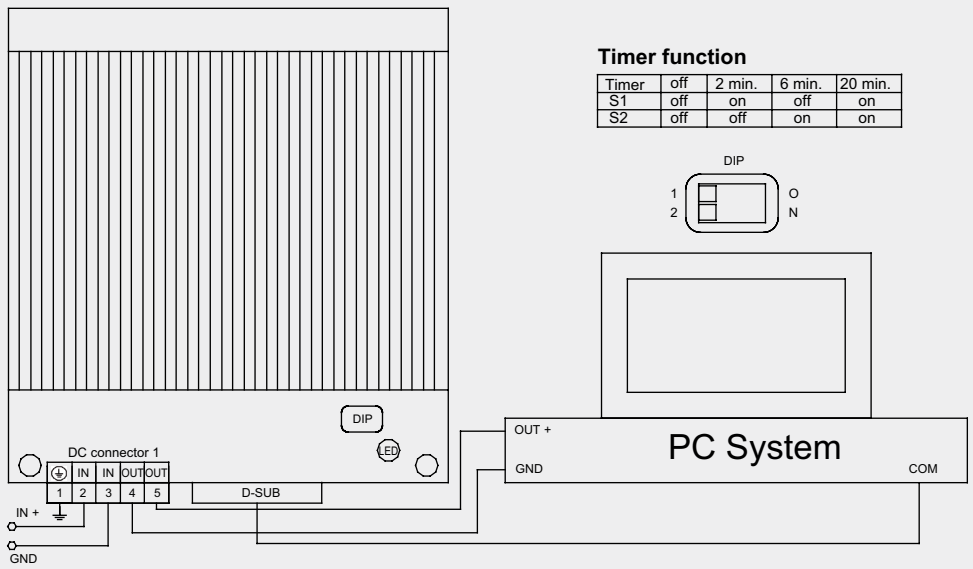
Drawing UPSI-2401



Connection

DC connector 1:
1 Ground
2 Input (+)
3 Input (–)
4 Output (–)
5 Output (+)

Interface connector 2: DSUB9 Interface for RUPS2000
1 Battery low output
2 n.c.
3 n.c.
4 Shutdown input
5 GND
6 n.c.
7 n.c.
8 Power Fail output
9 n.c.



Timer function

Timer	off	2 min.	6 min.	20 min.
S1	off	on	off	on
S2	off	off	on	on

Optional accessories

Article No.	Description
RUPS2000-B1	UPS Management Software (CD-ROM)
F1-0162	Mounting plate for UPSI-2401
CB-RS-020	Interface cable, 2m

UPSI-1202

12 V DC / 6 A

- **Continuous battery monitoring**
- **Timer function**
- **PC interface**

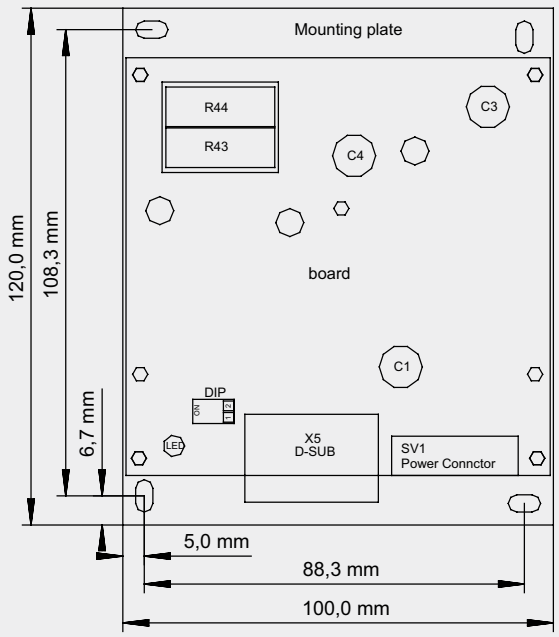
The newly designed DC UPS UPSI-1202 protects connected consumer loads from supply voltage fluctuations and interruptions. The µC controlled DC UPS provides various protections. Among the most important is the continuous battery monitoring feature. This ensures that sufficient capacitance remains in the battery to guarantee the supply of consumer loads in case of power failure. New features of the UPSI-2401 are a load sensor and a timer function. The timer function was integrated and allows a timer-controlled switch-off of the UPS.

Technical data

Input voltage	12 V DC (10.6…16 V)
Input current	6.6 A max.
Output voltage	In normal mode: app. 0.65 V max. below input voltage In battery mode: app. 14.5…9.7 V DC
Output current	6 A max.
Battery charge current	0.6 A max. (interneral battery charger)
Charging method	UI characteristic, with temperature regulation
Protection	Deep discharge protection: 9.7 V DC ±2 % Overload protection at output: 7.7 A for 2 seconds, switch off Short circuit protection: Switch off
Transfer time / limits	Mains / Battery 9.7 V DC ±2 %, Battery / Mains 10.6 V DC ±2 % Battery ok / Battery low 10.8 V DC, Battery low / Battery ok 11.2 V DC
Interface	DSUB9 connector, female Outputs: Power Fail, Battery Low / Input: Shutdown Optionally also available with UPS software for connection to common operating systems
Type of battery	Lead-gel-battery, maintenance-free, 2x 6 V / 3.0 Ah (recommended)
Safety / EMC	CE
Operating temperature	-20…+60 °C
Storage temperature	-40…+80 °C
Storage humidity	0…95 % RH, non-condensing
Dimensions	100 x 120 x 23 mm ±0.5 mm
Weight (net)	0.25 kg

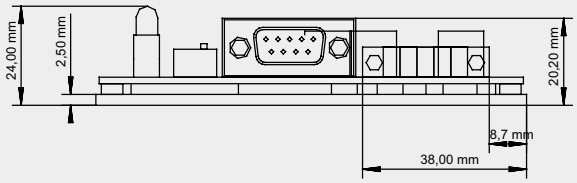
Product specific data	
LED display	3-colour-LED for „Power ok" (green), „Power Fail" (orange), „Battery low" (red/orange flashing) and „Battery defect" (red/green flashing), short circuit at output (red)
Battery monitoring	Battery test is carried out in normal mode approx every 10 minutes, in case of "Battery defect" notification the LED flashes red/green (optional sginaling contact)
Power consumption	App. 100 mA
Shutdown	During system start-up the shutdown signal is suppressed for app. 2 minutes.
Reboot function	If power fails and then returns during the shutdown mode of Windows®, the operating system will ‚lock' with the message „Your PC is now safe". The reboot function restarts the system after about 5 seconds.
Load sensor	Switch off in UPS mode <10 Watt
Timer function	2 min – 6 min – 20 min – off, adjustable via DIP switch
Back up time	App. 60 min. at 1.7 A, app. 25 min. at 3 A, app. 8 min. at 6 A (measured at +20 °C)

Drawing UPSI-1202



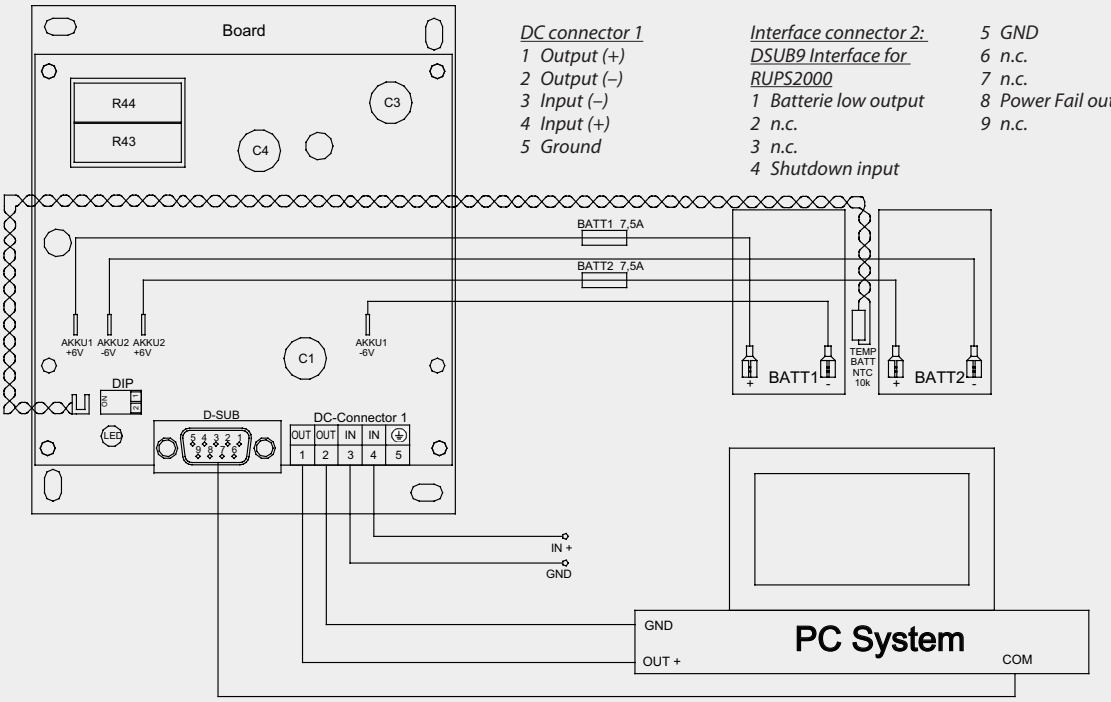
Timerfunction

Timer	off	2 min.	6 min.	20 min.
S1	off	off	on	on
S2	off	on	off	on



Tolerance ±0.5 mm

Connection



DC connector 1
1 Output (+)
2 Output (–)
3 Input (–)
4 Input (+)
5 Ground

Interface connector 2:
DSUB9 Interface for RUPS2000
1 Batterie low output
2 n.c.
3 n.c.
4 Shutdown input
5 GND
6 n.c.
7 n.c.
8 Power Fail output
9 n.c.

Temperature sensor for battery charge is included in delivery. Length: 500 mm

Optional accessories

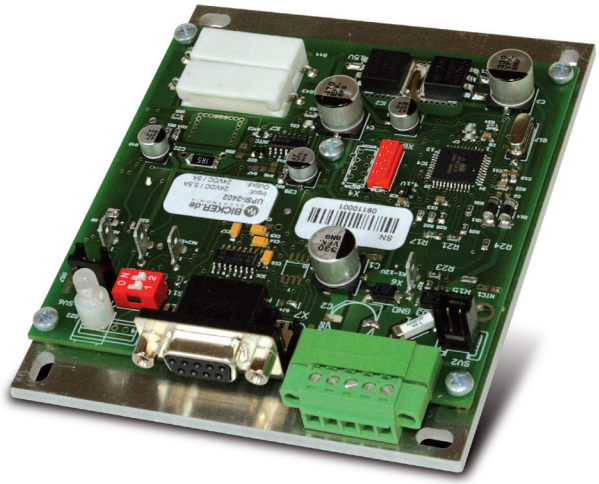
Article No.	Description
LC-R063R4PG	Maintenance-free lead battery, 6 V / 3.4 Ah (2 peaces needed)
BP-0625	CYCLON battery pack, 6 V / 2.5 Ah, -30…+70 °C (2 peaces needed)
RUPS2000-B1	UPS Management Software (CD-ROM)
CB-RS-020	Interface cable, 2 m

UPSI-2402

24 V DC / 5 A

- **Continuous battery monitoring**
- **Timer function**
- **PC interface**

The newly designed DC UPS UPSI-2402 protects connected consumer loads from supply voltage fluctuations and interruptions. The µC controlled DC UPS provides various protections. Among the most important is the continuous battery monitoring feature. This ensures that sufficient capacitance remains in the battery to guarantee the supply of consumer loads in case of power failure. New features of the UPSI-2401 are a load sensor and a timer function. The timer function was integrated and allows a timer-controlled switch-off of the UPS.



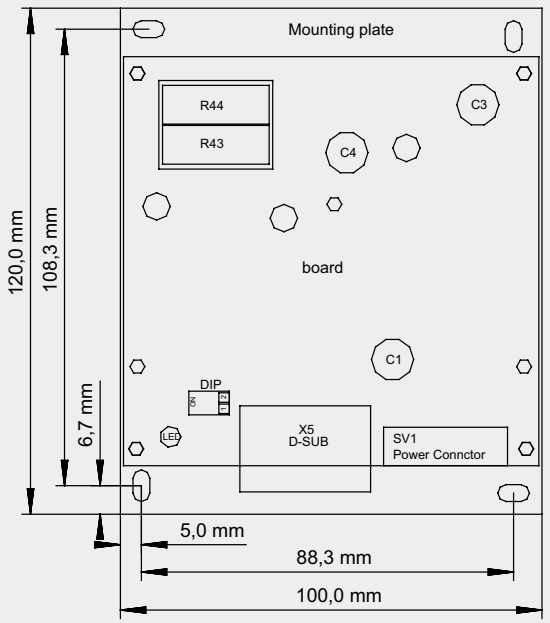
Technical data

Input voltage	24 V DC (22.5…30 V)
Input current	5.5 A max.
Output voltage	In normal mode: app. 0.5 V below input voltage In battery mode: app. 29…19 V DC
Output current	5 A max.
Battery charge current	0.4 A max. (internal battery charger)
Charging method	UI characteristic, with temperature regulation
Protection	Deep discharge protection: 19 V DC ±2 % Overload protection at output: 10 A for 2 seconds, switch off Short circuit protection: Switch off
Transfer time / limits	Mains / battery 20 V DC ±2 %, Battery / mains 22 V DC ±2 %
Interface	DSUB9 connector, female Outputs: Power Fail, Battery Low Input: Shutdown Optionally also available with UPS software for connection to common operating systems
Type of battery	Lead-gel-battery, maintenance-free, 12 V / 1.2 Ah (recommended)
Safety / EMC	CE
Operating temperature	-20…+60 °C
Storage temperature	-40…+80 °C
Storage humidity	0…95 % RH, non-condensing
Dimensions	100 x 120 x 23 mm ±0.5 mm
Weight (net)	2 kg

Product specific data

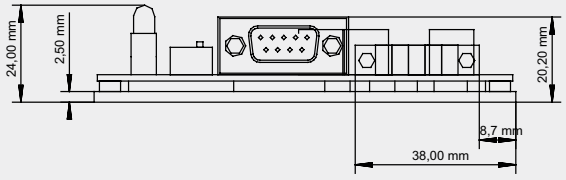
LED display	3-colour-LED for „Power ok" (green), „Power Fail" (orange), „Battery low" (red/orange flashing) and „Battery defect" (red/green flashing), short circuit at output/overload (red)
Battery monitoring	Battery test is carried out in normal mode approx every 10 minutes, in case of "Battery defect" notification the LED flashes red/green (optional sginaling contact)
Power consumption	App. 50 mA
Shutdown suppression	During system start-up the shutdown signal is suppressed for app. 2 minutes.
Reboot function	If power fails and then returns during the shutdown mode of Windows®, the operating system will ‚lock' with the message „Your PC is now safe". The reboot function restarts the system after about 5 seconds.
Load sensor	Switch-off in UPS mode <10 Watt
Timer function	2 min – 6 min – 20 min – off, adjustable via DIP switch
Back up time	App. 30 min at 1 A / app. 8 min at 3 A / app. 3 min at 5 A (measured at +20 °C)

Drawing UPSI-2402



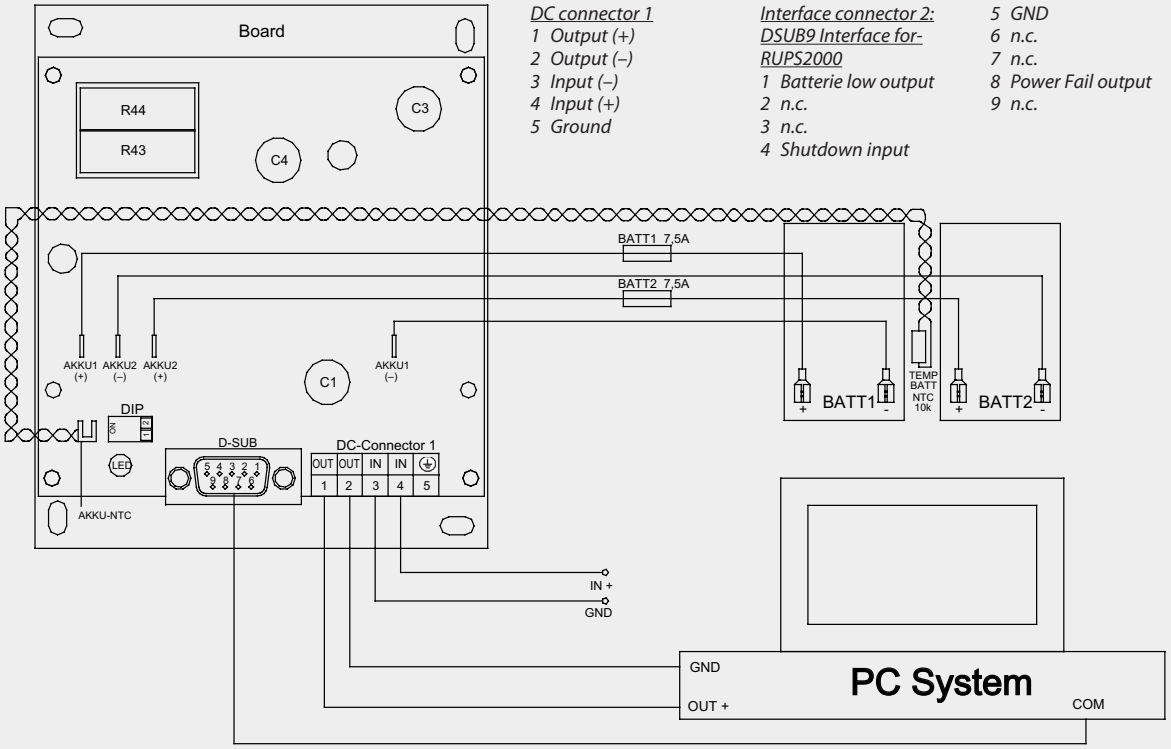
Timerfunction

Timer	off	2 min.	6 min.	20 min.
S1	off	off	on	on
S2	off	on	off	on



Tolerance ±0.5 mm

Connection



DC connector 1
1 Output (+)
2 Output (–)
3 Input (–)
4 Input (+)
5 Ground

Interface connector 2:
DSUB9 Interface for-
RUPS2000
1 Batterie low output
2 n.c.
3 n.c.
4 Shutdown input
5 GND
6 n.c.
7 n.c.
8 Power Fail output
9 n.c.

Temperature sensor for battery charge is included in delivery. Length: 500 mm

Optional accessories

Article No.	Description
MP1,2-12	Battery for UPSI-2402 (2 peaces necessary)
BP-1225	Battery pack, 12 V / 2.5 Ah, -30…+70 °C (2 peaces needed)
RUPS2000-B1	UPS Management Software (CD-ROM)
CB-RS-020	Interface cable, 2 m

BP-0625

6 V / 2.5 Ah

- **Temperature range from -30…+70 °C**
- **Up to 15 years lifetime**
- **Flexible configurations**

The high-quality battery pack BP-0625 functions as an energy store for the DC-UPS UPSI-1202. The CYCLON cells used in this battery pack are characterized by a very broad operating temperature range of -30…+70 °C. The CYCLON cells have a lifetime of up to 15 years which is a multiple of that of conventional lead-gel batteries.

This battery pack consists of powerful and long living CYCLON cells!

Technical data

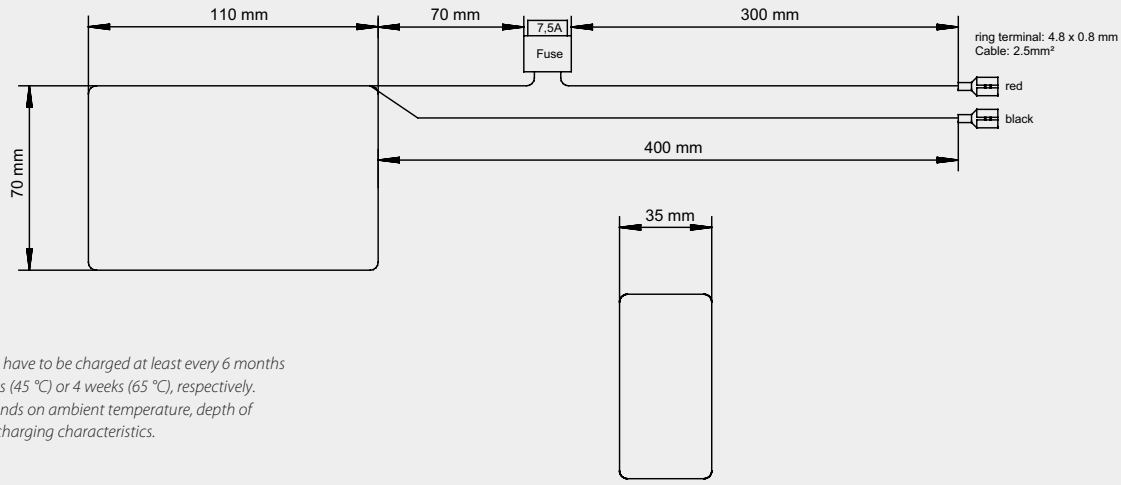
Nominal voltage	6 V DC
Capacitance	2.5 Ah
Number of batteries	3 cells à 2 V
Type of battery	Maintenance-free CYCLON cells
Life cycles	10 000…300 depending on ambient temperature, charge and discharge
Fuse	7.5 A, safety fuse
Operating temperature	-30…+70 °C
Storage temperature	-30…+70 °C
Dimensions	110 x 70 x 35 mm, ±2 mm
Weight (net)	0.6 kg

Back up time, measured at +21 °C by means of UPSI-1202			
Constant current	1 A	3 A	5 A
Time app.	1 h 46 min	30 min	15.5 min

The Back up time depends on battery capacitance, load and temperature.

Note:
For the UPSI-1202 2 pieces of BP-0625 are needed!

Drawing BP-0625



Stored batteries have to be charged at least every 6 months (25 °C), 18 weeks (45 °C) or 4 weeks (65 °C), respectively. Service life depends on ambient temperature, depth of discharge and charging characteristics.

BP-1225

12 V / 2.5 Ah

- **Temperature range from -30…+70 °C**
- **Up to 15 years lifetime**
- **Flexible configurations**

The high-quality battery pack BP-1225 functions as an energy store for the DC-UPS UPSI-2402. The CYCLON cells used in this battery pack are characterized by a very broad operating temperature range of -30…+70 °C. The CYCLON cells have a lifetime of up to 15 years which is a multiple of that of conventional lead-gel batteries.

This battery pack consists of powerful and long living CYCLON cells!

Technical data

Nominal voltage	12 V DC
Capacitance	2.5 Ah
Number of batteries	6 cells à 2 V
Type of battery	Maintenance-free CYCLON cells
Life cycles	10 000…300 depending on ambient temperature, charge and discharge
Fuse	7.5 A, safety fuse
Operating temperature	-30…+70 °C
Storage temperature	-30…+70 °C
Dimensions	220 x 70 x 35 mm, ±2 mm
Weight (net)	1.12 kg

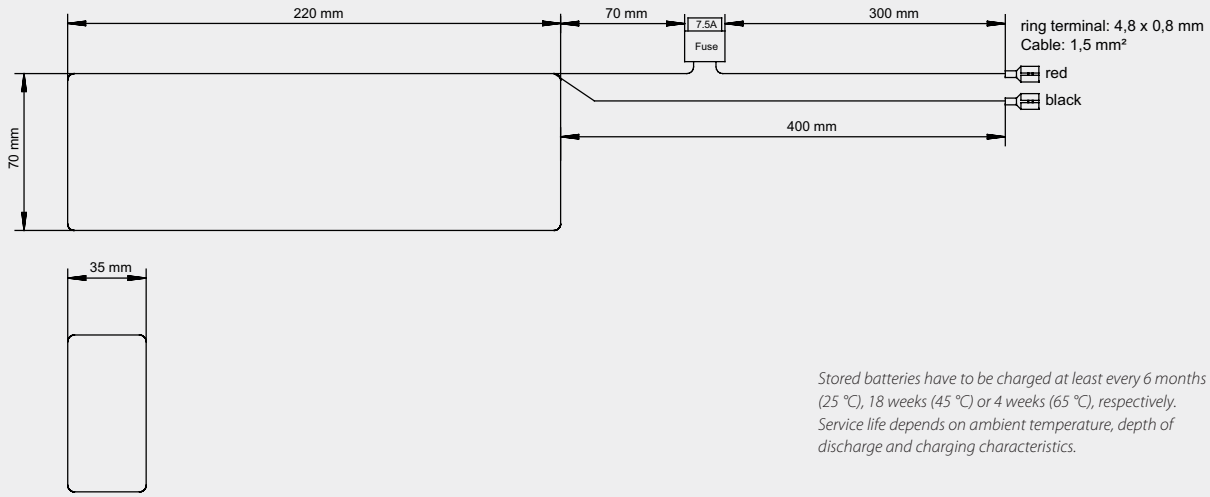
Back up time, measured at +21 °C by means of UPSI-2402

Constant current	1 A	3 A	5 A
Time app.	1 h 46 min	30 min	15.5 min

The Back up time depends on battery capacitance, load and temperature.

Note:
For the UPSI-2402 2 pieces of BP-1225 are needed!

Drawing BP-1225



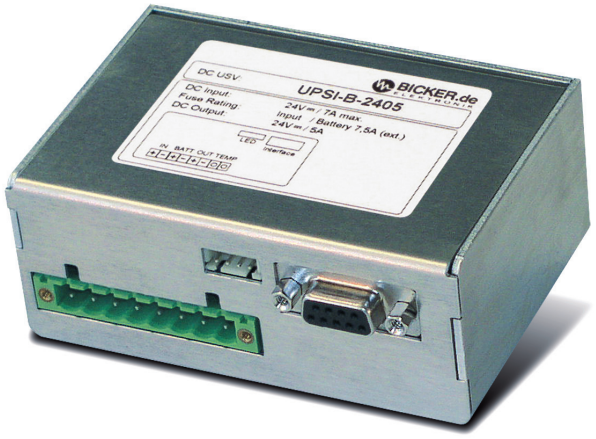
Stored batteries have to be charged at least every 6 months (25 °C), 18 weeks (45 °C) or 4 weeks (65 °C), respectively. Service life depends on ambient temperature, depth of discharge and charging characteristics.

UPSI-B-2405

24 V / 5 A

- **Operating temperature -30…+70 °C**
- **Reboot function**
- **Monitoring interface**

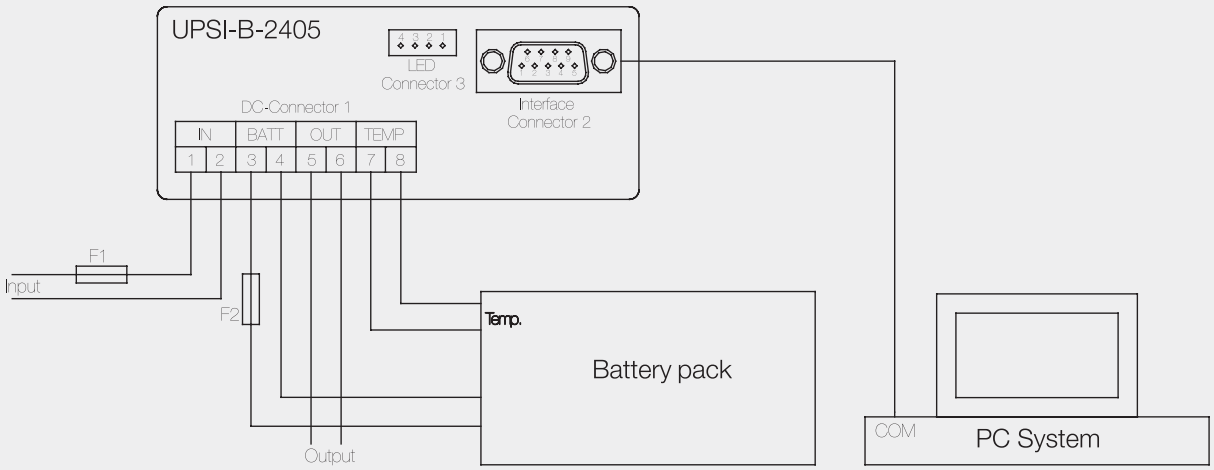
The UPSI-B-2405 buffers DC supplied systems by online technology via an intermediate DC link, which guarantees interrupt-free power for DC consumers loads with short hold times. An interface for connection to the operating system of the computer is provided. With the "Reboot" function the UPSI-B-2405 features an integrated auto-recovery routine to ensure a restart after a shut-down of the computer was initiated.



Technical data	
Input voltage	24 V DC (20…36 V)
Input current	7 A max.
Output voltage	Normal mode: app. 0.4 V below input voltage Battery mode: app. 30.9…19.5 V DC
Output power	120 Watt
Battery charge current	1 A max. (internal battery charger)
Charging voltage	26.4…30.9 V DC, depending on temperature
Protection	Discharge protection of battery: 19.5 V DC ±2 % Overvoltage protection: From >32 V DC the UPSI-B-2405 switches to battery mode to protect the downstream consumer loads
Transfer time / transfer limits	0 ms
Back up time	Depending on battery capacitance and load
Interface	DSUB9 female, open collector, potential-free for Outputs: Power fail, battery low Input: Shutdown
Battery type	Maintenance-free lead tin battery (Hawker Cyclon)
Operating temperature	-30…+70 °C
Dimensions	100 x 68 x 40 mm, ±0.5 mm
Weight (net)	App. 0.2 kg

Product specific data	
Switch over voltage	Normal mode to battery mode 20 V DC ±2 %, measured at minimum load of 0.5 A Battery mode to normal mode 22 V DC ±2 %, battery low 21 V DC ±2 %
Inverse-polarity protection / input	Fuse 7.5 A (must be provided on-site by customer)
Inverse-polarity protection / battery	Fuse 7.5 A (at battery pack BP-2425)
Software (optional)	UPS software RUPS2000 OEM, for all established operating systems
LED display	3 colour LED connector for: Power ok (green) / Power Fail (orange) Battery Low (red / orange flashing) / Battery defect (red / green flashing)
Battery capacitance	24 V / 2.5 Ah, recommended Battery pack , BP-2425 or BP-2425C
Battery monitoring	Battery test is carried out every 10 minutes in normal mode
Shutdown-Suppression	The Shutdown signal is disabled for about two minutes after startup, because a possible interface test of Windows® combined with a mains failure at the same time would switch the module off.
Reboot function	If DC IN fails and main power returns during shutdown mode of Windows®, the operating system will 'lock' with the message "Your PC is now safe". The reboot function restarts the system after about 5 seconds (operator intervention not required).
Power consumption	App. 100 mA

Drawing UPSI-B-2405



DC connector 1: Power

1 DC input +
2 GND
3 Battery +
4 Battery -
5 DC Output +
6 GND
7 Temperature sensor battery (NTC 10K)
8 Temperature sensor battery (at battery pack BP-2425)

DC connector 1:
Plugable quick clamp connection,
Phoenixcontact (included in delivery)
Order No. FKC 2,5 HC/8-STF-5,08

Interface connector 2: DSUB9 interface for RUPS2000

1 n.c.
2 Power Fail, collector
3 n.c.
4 Reference, Power Fail, Battery Low, emitter
5 Battery Low, collector
6 Shutdown input
7 Reference Shutdown
8 n.c.
9 n.c.

LED connector 3: LED display

1 GND
2 Power LED (green)
3 Batterie Low LED (red / orange flashing)
4 n.c.
Power Fail (orange)
Battery defeyt (red / green flashing)

Note: Installing a 7.5 A fuse on site at both the input (F1) and output (F2) (e.g. Pudenz Order-No. 162.6185.475) is recommended.

Tolerance ±0.5 mm

Optional accessories

Article No.	Description
BP-2425-05	Battery pack, 24 V DC / 2.5 Ah / -30…+70 °C
BP-2412A	Battery pack, 24 V DC / 1.2 Ah / 0…+40 °C
RUPS2000 OEM	UPS software bundle

BP-2412A

24 V / 1.2 Ah

- **Battery pack for DC UPS UPSI-B-2405**
- **Maintenance-free lead battery**
- **Compact design**

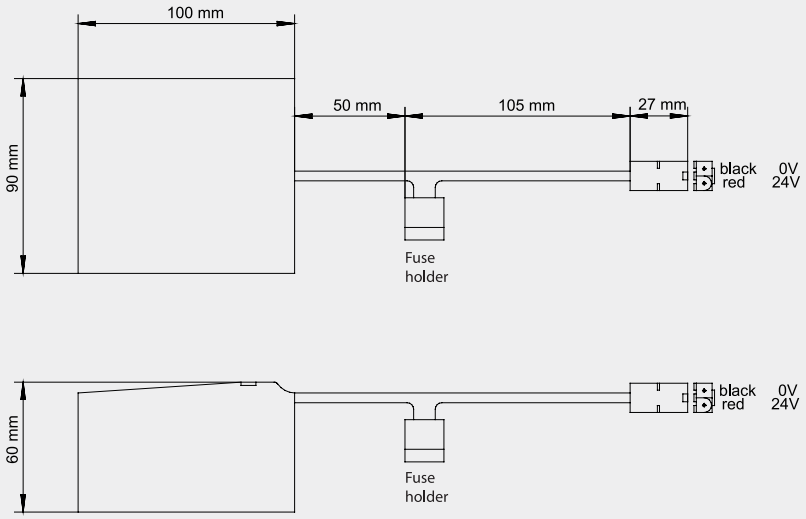
The battery pack BP-2412A serves to store energy for the DC UPS UPSI-B-2405. It is connected to the UPSI-B-2405 via a two-pole connector. A fuse for short-circuit protection is integrated in the circuit. The equipped lead batteries are maintenance-free.

Technical data	
Voltage	24 V DC
Capacitance	1.2 Ah
Number of batteries	2
Type of battery	Maintenance-free lead battery, 12 V
Fuse	7.5 A, safety fuse
Connector	Alex 6420-02F1
Operating temperature	0…+40 °C
Storage temperature	-20…+50 °C
Dimensions	100 x 90 x 60 mm ±1 mm
Weight (net)	1.3 kg

Backup time, measured at +21 °C with UPSI-B-2405			
Discharge current	1 A	3 A	5 A
Time approx.	30 min.	8 min.	3 min.

Backup time, measured at +21 °C using a UPSI-B-2405.

Drawing BP-2412A



The service life of the batteries is approx. 4–5 years at +20 °C and diminishes by half with each temperature increase by 10 °C according to EUROBAT.

During storage the battery pack should be charged every 6 months.

Tolerance battery: ±1 mm
Tolerance cable: ±20 mm

BP-2425-05

24 V / 2.5 Ah

- **Temperature range -30…+70 °C**
- **Long service life up to 15 years**
- **Temperature sensor**

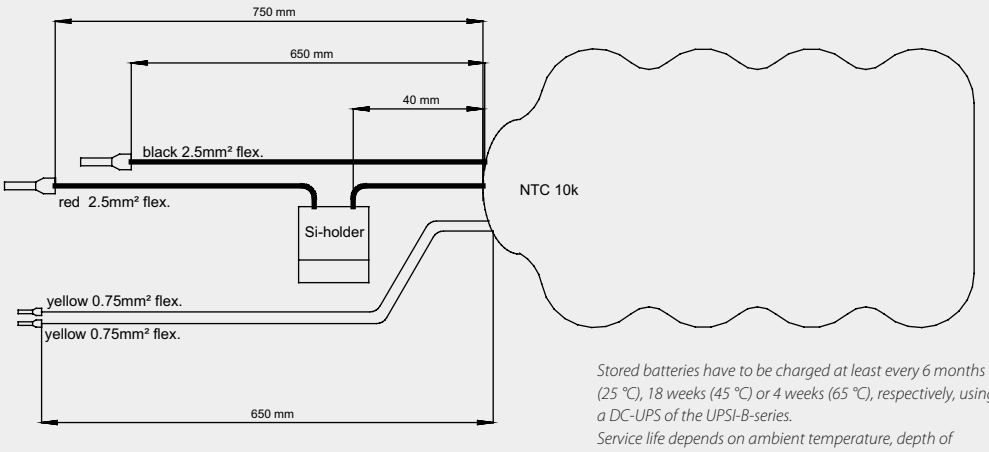
The high-quality battery pack BP-2425-05 serves to store energy for the DC UPS UPSI-B-2405. The equipped CYCLON cells are distinguished by their wide ambient operating temperature range from -30…+70 °C. The service life of CYCLON cells with up to 15 years is considerably higher as compared to conventional lead-acid batteries. To ensure maximal performance the charging voltage is controlled by a temperature sensor.

This battery pack consists of high-quality and powerful CYCLON cells!

Technical data	
Nominal voltage	24 V DC
Capacitance	2.5 Ah
Numbers of batteries	12 cells à 2 V
Type of battery	Maintenance-free pure lead tin batteries
Life cycles	10 000…300 depending on ambient temperature, charge and discharge
Fuse	15 A, safety fuse
Operating temperature	-30…+70 °C
Storage temperature	-30…+70 °C
Temperature sensor	For use with UPSI-B series
Dimensions	100 x 155 x 67 mm, ±2 mm
Weight (net)	2.2 kg

Back up time, measured at +21 °C			
Discharge current	1 A	3 A	5 A
Time app.	1 h 46 min	30 min	15 min 30 Sec

Drawing BP-2425-05



Tolerance ±1 mm

Cable length 550 mm ±20 mm
red: Battery +
black: Battery GND
yellow: Temperature-Sensor
yellow: Temperature-Sensor

Stored batteries have to be charged at least every 6 months (25 °C), 18 weeks (45 °C) or 4 weeks (65 °C), respectively, using a DC-UPS of the UPSI-B-series.
Service life depends on ambient temperature, depth of discharge and charging characteristics.

UPSI-B-2410

24 V DC / 10 A

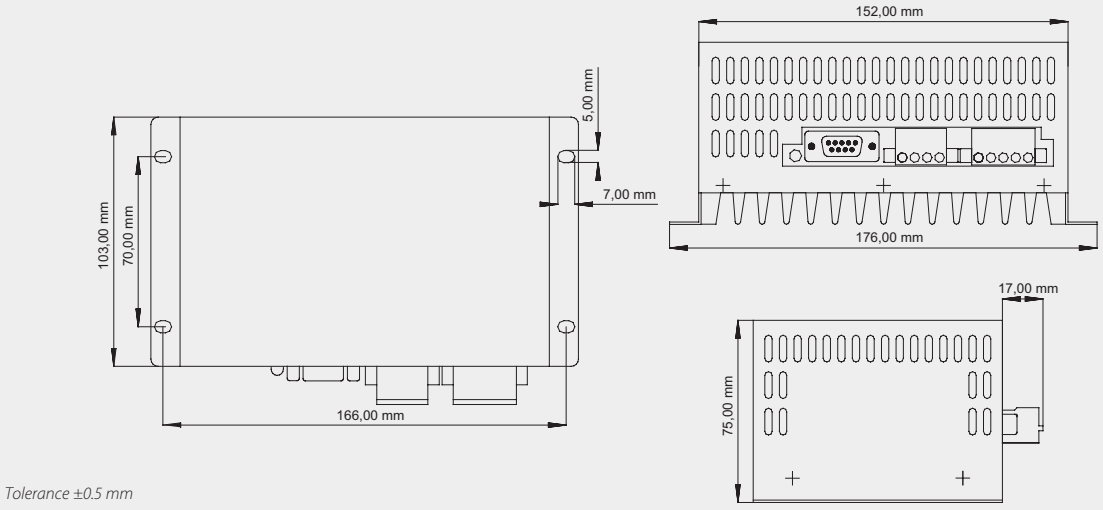
- **Battery monitoring**
- **Online technology**
- **Battery pack BP-2425C also for -30…+70 °C!**

The UPSI-B-2410 buffers DC supplied systems in ambient temperatures where other UPS fail. Adequate batteries are included. Online technology guarantees interrupt-free power. Microprocessor controlled charging and an active battery check provides a long battery life. Typical application areas are automation and automotive.

Technical data	
Input voltage	24 V DC (22…36 V)
Input current	12.5 A max.
Output voltage	Normal mode: app. 0.4 V below input voltage Battery mode: app. 30.9…19 VDC
Output current	10 A max.
Battery charge current	2 A max. (internal battery charger)
Charging voltage	26,4…31,2 V, temperature-controlled
Discharge protection of battery	19 V DC ±2 %
Battery low	<21 V ±2 % (Battery mode)
Transfer time / transfer limits	0 ms, online technology, Main / BAT 20 V /, BAT / Main 22 V
Back up time	See datasheet of battery pack BP-2425C
Interface	DSUB9 female, open collector, potential-free for Outputs: power fail, battery low Input: Shutdown Optionally also with UPS software for connecting all established operating systems
Type of battery	Maintenance-free pure lead-tin battery (PLT)
Safety / EMC	CE
Operating temperature	-30…+70 °C
Storage temperature	-40…+80 °C
Operating humidity	0…95 % RH, non-condensing
Dimensions	182 x 102 x 73 mm ±0.5 mm
Weight (net)	0.75 kg

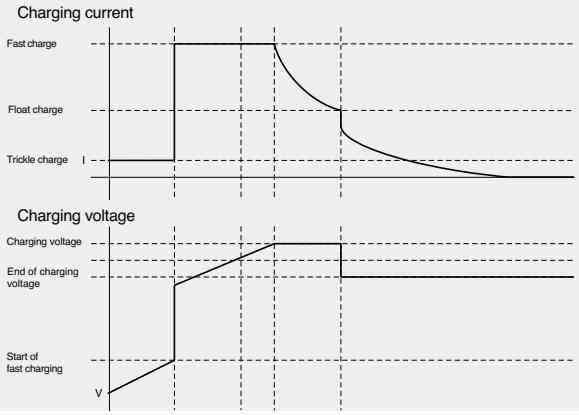
Product specific data	
LED display	3 colour LED for “Power ok” (green), “Power Fail” (orange), “Battery low” (red/orange flashing) and “Battery defect” (red/green flashing)
Battery monitoring	Battery test is carried out every 10 minutes in normal mode
Power consumption	App. 150 mA
Operating height	Max. 12 000 feet above sea level
Shutdown-Suppression	The Shutdown signal is disabled for about two minutes after startup.
Reboot function	If DC IN fails and main power returns during shutdown mode of Windows®, the operating system will ‘lock’ with the message “Your PC is now safe”. The reboot function restarts the system after about 5 seconds.

Drawing UPSI-B-2410



Tolerance ±0.5 mm

Exact charging via microcontroller

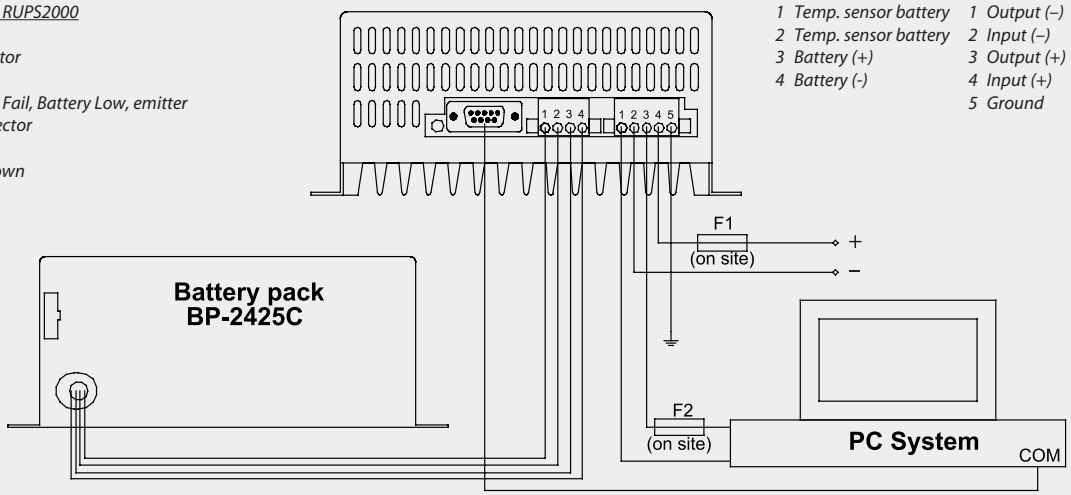


Connection

Interface connector 2:
DSUB9 interface for RUPS2000
1 n.c.
2 Power Fail, collector
3 n.c.
4 Reference, Power Fail, Battery Low, emitter
5 Battery Low, collector
6 Shutdown input
7 Reference Shutdown
8 n.c.
9 n.c.

DC connector 1
1 Temp. sensor battery
2 Temp. sensor battery
3 Battery (+)
4 Battery (-)

DC connector 2
1 Output (–)
2 Input (–)
3 Output (+)
4 Input (+)
5 Ground



Note: Installing a fuse on site at both the input (F1) and output (F2) is recommended.

Optional accessories

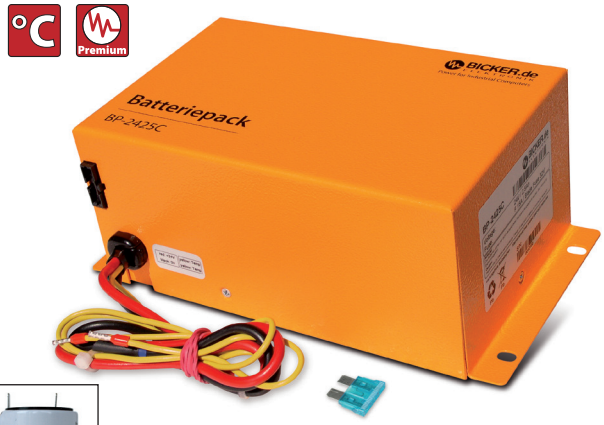
Article No.	Description
BP-2425C	Battery pack, 24 V DC / 2.5 Ah / -30…+70 °C
BP-2425	Battery pack, 24 VDC / 2.5 Ah / -30…+70 °C
RUPS2000 OEM	UPS Software bundle

BP-2425C

24 V / 2.5 Ah

- **Temperature range -30…+70 °C**
- **Service life up to 15 years**
- **Temperature sensor**

The high-quality battery pack BP-2425C serves to store energy for the DC UPS UPSI-B-2410. The equipped CYCLON cells are distinguished by their wide ambient operating temperature range from -30…+70 °C. The service life of CYCLON cells with up to 15 years is considerably higher as compared to conventional lead-acid batteries. To ensure maximal performance the charging voltage is controlled by a temperature sensor.



This battery pack consists of high-quality and powerful CYCLON cells!

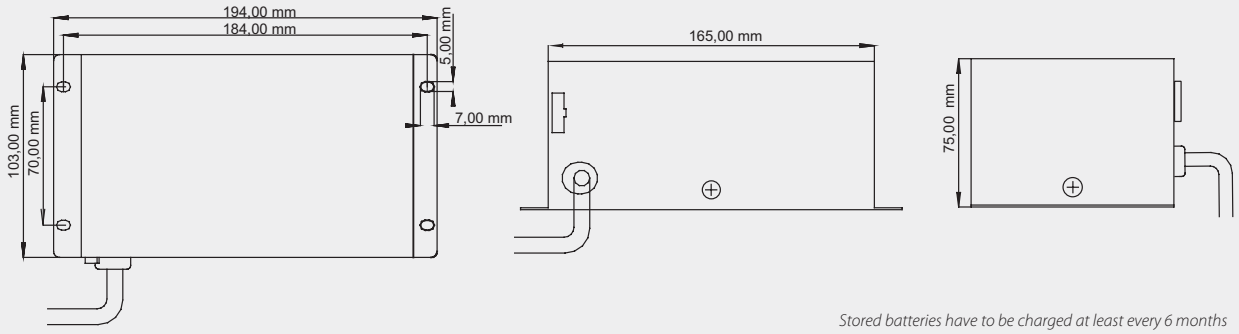
Technical data	
Nominal voltage	24 V DC
Capacitance	2.5 Ah
Number of batteries	12 cells à 2 V
Type of battery	Maintenance-free pure lead tin batteries
Life cycles	10 000…300 depending on ambient temperature, charge and discharge
Fuse	15 A, safety fuse
Operating temperature	-30…+70 °C
Storage temperature	-30…+70 °C
Temperature sensor	For use with UPSI-B-24xx series
Dimensions	194 x 125 x 75 mm, ±0.5mm
Weight (net)	2.3 kg

Back up time measured at +21 °C by means of UPSI-B-2410					
Constant current	1 A	3 A	5 A	7,5 A	10 A
Time app.	1 h 46 min	30 min	15 min 30 Sec	9 min	6 min 30 Sec

The Back up time depends on battery capacitance, load and temperature.

DC UPS

Drawing BP-2425C



Tolerance ±0.5 mm
Cable length 550 mm ±20 mm

red: Battery +
black: Battery GND

yellow: Temperature-Sensor
yellow: Temperature-Sensor

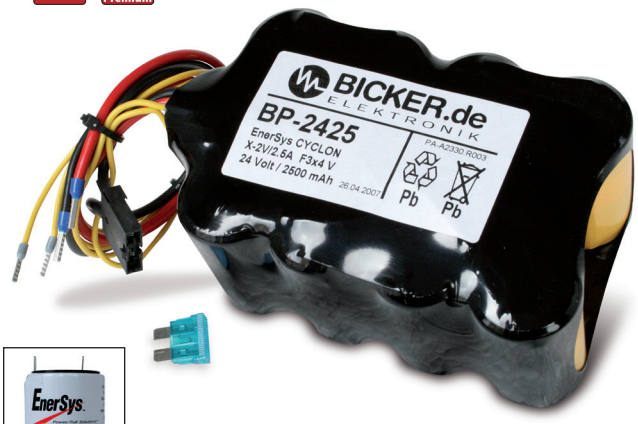
Stored batteries have to be charged at least every 6 months (25 °C), 18 weeks (45 °C) or 4 weeks (65 °C), respectively, using a DC-UPS of the UPSI-B-series.
Service life depends on ambient temperature, depth of discharge and charging characteristics.

BP-2425

24 V / 2.5 Ah

- **Temperature range -30…+70 °C**
- **Long service life**
- **Quick charging possible**

The metal plated battery pack BP-2425 is used as a standard battery pack for the UPSI-B-24xx series. Pure lead tin (PLT) batteries allow a wide operating temperature range from -30…+70 °C and a service life of up to 15 years. The ambient temperature is checked by an internal sensor for correct charging.

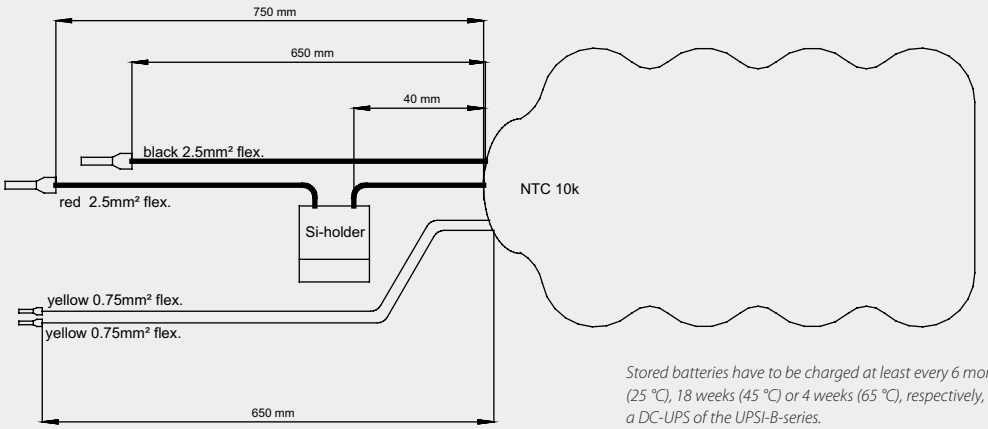


This battery pack consists of high-quality and powerful CYCLON cells!

Technical data	
Nominal voltage	24 V DC
Capacitance	2.5 Ah
Numbers of batteries	12 cells à 2 V
Type of battery	Maintenance-free pure lead tin batteries
Life cycles	10 000…300 depending on ambient temperature, charge and discharge
Fuse	15 A
Operating temperature	-30…+70 °C
Storage temperature	-30…+70 °C
Temperature sensor	For use with UPSI-B series
Dimensions	100 x 155 x 67 mm, ±2 mm
Weight (net)	2.2 kg

Back up time, measured at +21 °C by means of UPSI-B-2410					
Discharge current	1 A	3 A	5 A	7.5 A	10 A
Time app.	1 h 46 min	30 min	15 min 30 sec	9 min	6 min 30 sec.

Drawing BP-2425



Tolerance ±1 mm

Cable length 550 mm ±20 mm
red: Battery +
black: Battery GND
yellow: Temperature-Sensor
yellow: Temperature-Sensor

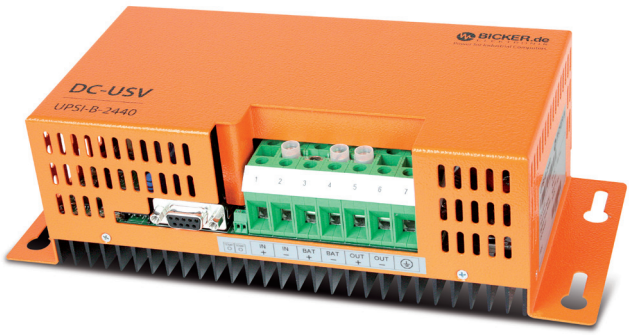
Stored batteries have to be charged at least every 6 months (25 °C), 18 weeks (45 °C) or 4 weeks (65 °C), respectively, using a DC-UPS of the UPSI-B-series.
Service life depends on ambient temperature, depth of discharge and charging characteristics.

UPSI-B-2440

24 V DC / 40 A

- **Battery monitoring**
- **Online technology**
- **Battery pack BP-2450C also for -30…+70 °C!**

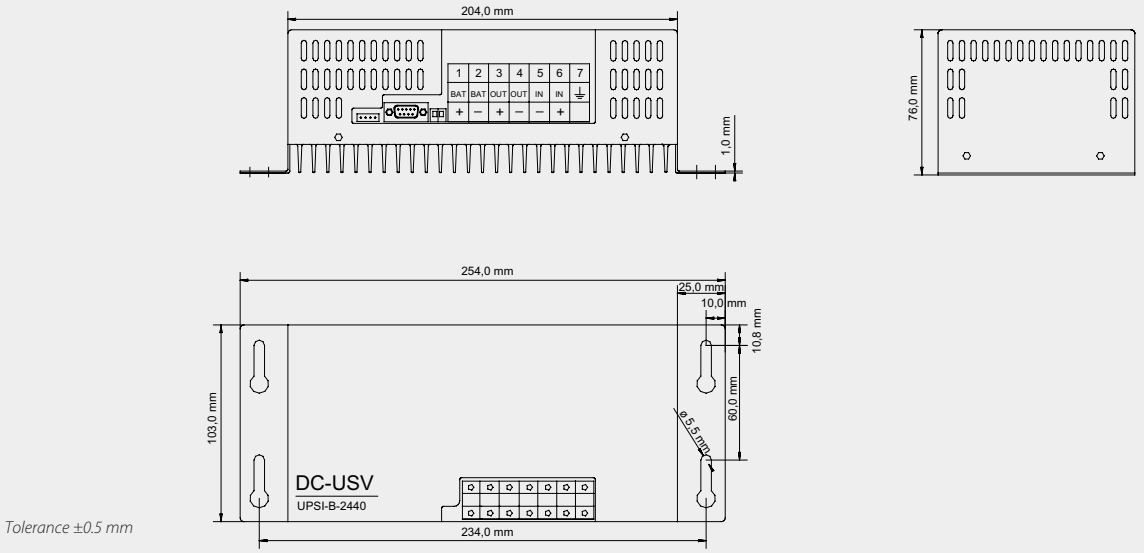
The UPSI-B-2440 buffers DC supplied systems in ambient temperatures where other UPS fail. Adequate batteries are included. Online technology guarantees interrupt-free power. Microprocessor controlled charging and an active battery check provides a long battery life. Typical application areas are automation and automotive.



Technical data	
Input voltage	24 V DC (22…32 V)
Input current	42.5 A max.
Output voltage	Normal mode: app. 0.4 V below input voltage Battery mode: app. 30.9…19 VDC
Output current	40 A max.
Battery charge current	2 A max. (internal battery charger)
Charging voltage	26.4…31.2 V, temperature-controlled
Discharge protection of battery	19 V DC ±2 %
Battery low	<21 V ±2 % (Battery mode)
Transfer time / transfer limits	0 ms, online technology, Main to battery 20 V /, battery to main 22 V
Back up time	See datasheet of battery pack BP-2450C
Interface	DSUB9 female, open collector, potential-free for Outputs: power fail, battery low Input: Shutdown Optionally also with UPS software for connecting all established operating systems
Type of battery	Maintenance-free pure lead-tin battery (PLT)
Safety / EMC	CE
Operating temperature	-30…+70 °C
Storage temperature	-40…+80 °C
Operating humidity	0…95 %, non-condensing
Dimensions	253 x 104 x 75 mm ±0.5 mm
Weight	1.3 kg

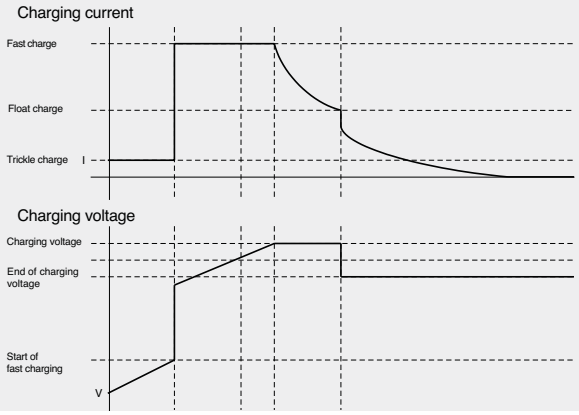
Product specific data	
LED display (optional)	3 colour LED for “Power ok” (green), “Power Fail” (orange), “Battery low” (red/orange flashing) and “Battery defect” (red/green flashing)
Battery monitoring	Battery test is carried out every 10 minutes in normal mode
Power consumption	App. 150 mA
Operating height	Max. 12 000 feet above sea level
Shutdown-Suppression	The Shutdown signal is disabled for about two minutes after startup.
Reboot function	If DC IN fails and main power returns during shutdown mode of Windows®, the operating system will ‘lock’ with the message “Your PC is now safe”. The reboot function restarts the system after about 5 seconds.

Drawing UPSI-B-2440



Tolerance ±0.5 mm

Exact charging via microcontroller

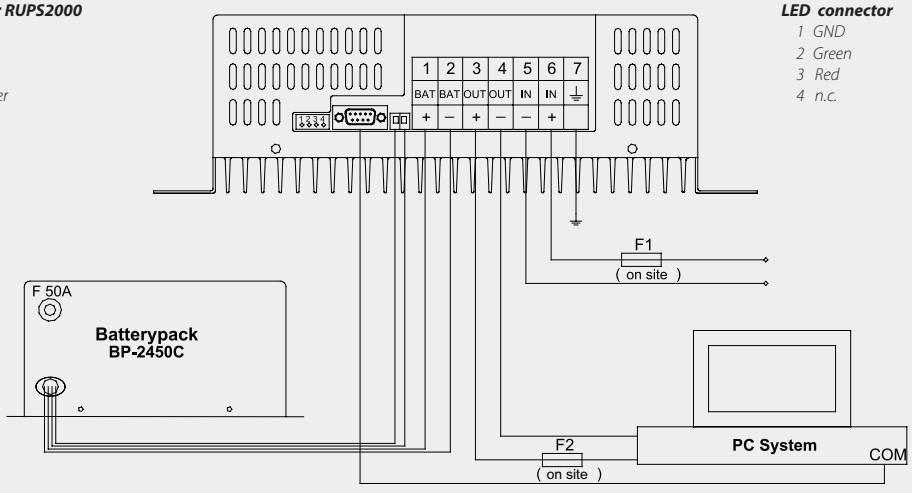


Connection

Interface connector: DSUB9 interface for RUPS2000
- *1 n.c.*
- *2 Power Fail, Collector*
- *3 n.c.*
- *4 Reference, Power Fail, Battery Low, Emitter*
- *5 Battery Low, Collector*
- *6 Shutdown Input*
- *7 Reference Shutdown*
- *8 n.c.*
- *9 n.c.*

TEMP
- *1 Temperature sensor battery*
- *2 Temperature sensor battery*

DC connector
- *1 Battery: BAT (+)*
- *2 Battery: BAT (–)*
- *3 Output: OUT (+)*
- *4 Output: OUT (–)*
- *5 Input: IN (–)*
- *6 Input: IN (+)*
- *7 Ground: GND*



LED connector
- *1 GND*
- *2 Green*
- *3 Red*
- *4 n.c.*

Note: Installing a fuse on site at both the input (F1) and output (F2) is recommended.

Optional accessories

Article No.	Description
BP-2450C	Battery pack, 24 V DC / 5 Ah / -30…+70 °C
RUPS2000 OEM	UPS Software bundle

BP-2450C

24 V / 5 Ah

- **Temperature range -30…+70 °C**
- **Service life up to 15 years**
- **Temperature sensor**

The high-quality battery pack BP-2450C serves to store energy for DC UPS models of the UPSI-B-24xx series. The equipped CYCLON cells are distinguished by their wide ambient operating temperature range from -30…+70 °C. The service life of CYCLON cells with up to 15 years is considerably higher as compared to conventional lead-acid batteries. To ensure maximal performance the charging voltage is controlled by a temperature sensor.

This battery pack consists of high-quality and powerful CYCLON cells!

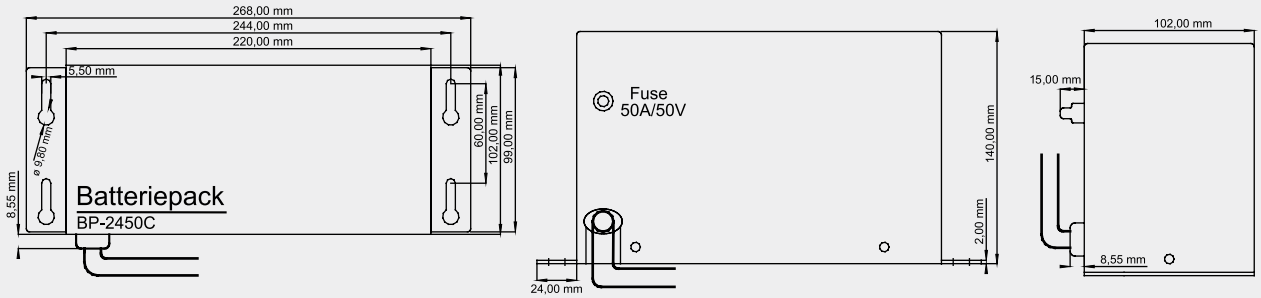
Technical data	
Nominal voltage	24 V DC
Capacitance	5 Ah
Number of batteries	12 cells à 2 V
Type of battery	Maintenance-free CYCLON batteries
Life cycles	10 000…300 depending on ambient temperature, charge and discharge
Fuse	50 A, circuit breaker
Operating temperature	-30…+70 °C
Storage temperature	-30…+70 °C
Temperature sensor	For use with UPSI-B-24xx series
Dimensions	268 x 117 x 140 mm, ±0.5mm
Weight (net)	6.7 kg

Back up time measured at +21 °C by means of UPSI-B-2440						
Discharge current	1 A	5 A	10 A	20 A	30 A	40 A
Time app.	4 h 50 min	48 min	21 min	8 min	5 min	3 min

The Back up time depends on battery capacity, load and ambient temperature.

DC UPS

Drawing BP-2450C



Tolerance ±0.5 mm
Cable length 550 mm ±20 mm

red: Battery +
black: Battery GND

yellow: Temperature sensor
yellow: Temperature sensor

Stored batteries have to be charged at least every 6 months (25 °C), 18 weeks (45 °C) or 4 weeks (65 °C), respectively, using a DC-UPS of the UPSI-B-series.
Service life depends on ambient temperature, depth of discharge and charging characteristics.

RUPS 2000 OEM

UPS management software

- **Easy to use**
- **Easy to install**
- **Open collector interface**

The UPS management software RUPS 2000 OEM is the means of communication between UPS and PC. Users can monitor the input voltage and individually adjust the shutdown function. Also, this software serves to define the PC and then to switch off the UPS.

Technical data

This article consists of the following components:

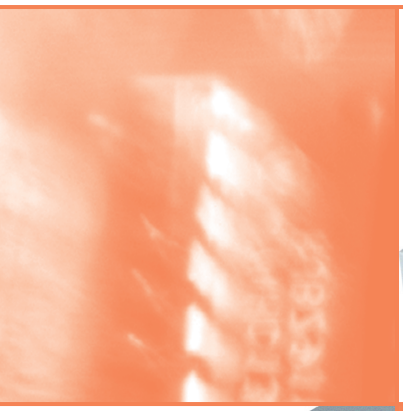
- CD-ROM with series number on cover
- 9-pole interface cable, type: M2501 (red), length app. 180 cm

This software supports the following operating systems:

- Novell NetWare®
- Windows® 3.X / 95 / 98 / NT / ME / 2000 / 2003 / XP / Vista / 7
- Linux
- LAN Manager
- IBM Lan Server
- Artisoft LANtastic

Windows® is a registered trademark of Microsoft Corp.
NetWare® is a registered trademark of Novell.

UPS
systems



BICKER.de
TEST

BICKER.de
IUPS-401

DVD
LG
BICKER.de

DVD
LG
BICKER.de

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TEST

Why complicate things?

more elegant **...If there is a solution!**

On the pages 254 to 258 you can find a variety of AC UPS systems and battery packs.

You did not find what you were looking for? Please do not hesitate to contact us! Our product range of standard models as well as special editions offers much more. ☎ +49 (0) 906 70595-0

IUPS-401	400 VA	230 V AC	5 80	Integrated UPS	254
IUPS-301	300 VA	230 V AC	80	Integrated UPS	256
IUPS-501	500 VA	230 V AC	80	Integrated UPS	257
IUPS-300K	300 VA	230 V AC	80	Integrated UPS	258

IUPS-401

400 VA

- **Integrated UPS**
- **USB interface**
- **Reboot function**

Other than conventional uninterruptable power supplies the IUPS-401 was designed to be installed into a PC. Thus, UPS and PC become one compact space-saving unit. The IUPS-401 can easily be installed into a drive slot and its handling is exceptionally user-friendly. Via interface and the UPS management software "UPSILON2000" the computer will be shut down and switched off in case of mains power failure.

Black font panel
incl. in delivery

Technical data

Output power	400 VA / 240 W
Input voltage	230 V AC ±15 %
Input frequency	50 / 60 Hz ±5 %
Output voltage	230 V AC ±15 %
Output frequency	50 / 60 Hz ±1 %
Charging time	App. 8 h (90 % load)
UPS Classification / Wave form	VFD / rectangular
Protection	Overload protection: UPS mode: 100…120 %, alarm / 120…190 %, switch off Mains mode: fuse Overtemperature protection: switch off
Transfer time	<6 ms
Back up time	100 W / 166 VA load app. 5 minutes 180 W / 300 VA load app. 2…3 minutes
Interface	USB for UPS management software
Safety / EMC	EN62040-1-1 / CE / EN62040-2
Operating temperature	0…40 °C
Storage temperature	-15…55 °C
Dimensions	42 x 146 x 248 mm ±0.85 mm
Weight (net)	2.75 kg

Product specific data

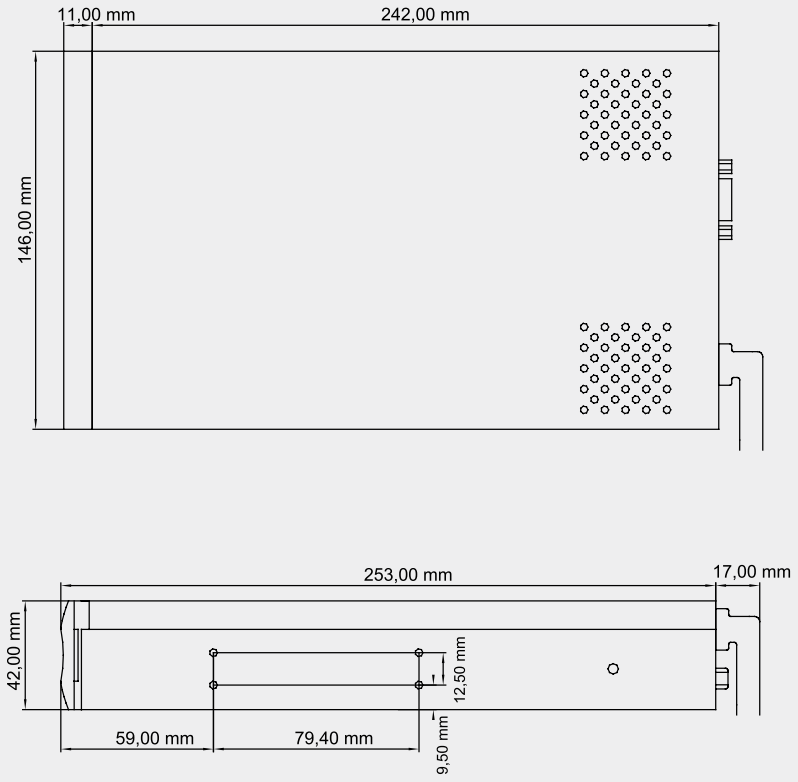
Transfer limit in mains / UPS mode	190 V AC ±5 %
Transfer limit into UPS mode in case of overvoltage at the input	248 V AC ±5 %
Type of battery	2 x 6 V / 3 Ah, maintenance-free lead batteries (VRLA)
Noise development	<35 dbA
Load sensor	Switch off at <20 Watt
Button	To switch off alarm sound press for app. 1 second To switch off UPS press for app. 4 seconds To switch on UPS (cold start, without mains supply) press for app. 2 seconds
UPS management software	UPSilon 2000 and internal USB cable included in delivery WIN 98, NT, 2000, 2003, XP, ME, Vista, 7, Novell NetWare®, LINUX, FreeBSD, others on request
Reboot function	If mains voltage returns after a power failure while Windows® is already shutting down, the UPS switches the PC off (after the shut-down period) and switches it on again after approximately 30 seconds (observe BIOS settings of mainboard).

During storage the UPS has to be charged at least every 6 months.

Status display and alarm			
Status display	**Alarm**	**Alarm sound detachable**	**LED**
Normal UPS mode	–		green
Battery charge (mains mode)	–		green flashing
Switch off UPS (without load)	–		red flashing
UPS battery mode	2 beep sounds every 3 seconds	yes	red flashing
UPS battery mode (Battery low)	4 beep sounds a second	no	red flashing (quickly)
Overload (Normal mode)	Continuous sound	no	red
Internal UPS failure	8 beep sounds per 2 sec., 2 sec. stillness	no	red flashing (quickly)
Overtemperature	8 beep sounds per 2 sec., 2 sec. stillness	yes	red flashing (quickly)
Battery defect	–		red flashing (quickly)

Contents of Delivery
1 UPS unit IUPS-401
1 Slot bracket with UPS PCB
1 Mains cable
1 User's Manual
1 CD with software UPSilon 2000
1 Internal USB cable
1 Connection cable (USB PCB to UPS)
1 Black front panel
1 External USB cable 2.0, A-/B-plug / 500 mm

Drawing IUPS-401



Tolerance ±0.5 mm

IUPS-301

300 VA

- **Integrated UPS**
- **Communications interface**
- **Temperature controlled**

Other than conventional uninterruptable power supplies the IUPS-301 was designed to be installed into a PC. Thus, UPS and PC become one compact space-saving unit. The IUPS-301 can easily be installed into a drive slot and its handling is exceptionally user-friendly. Via interface and the UPS management software "RUPS 2000 OEM" the computer will be shut down and switched off in case of mains power failure.

Technical data	
Output power	300 VA / 180 W
Input voltage	230 V AC ±15 %
Input frequency	50 Hz ±5 %
Output voltage	230 V AC ±15 %
Output frequency	50 Hz ±1 %
Charging time	6…8 h
UPS Classification / Wave form	VFD / rectangular
Power factor	0.6
Overload protection	UPS mode: switch off / mains mode: fuse
Transfer time	<4 ms
Back up time	100 W / 166 VA load app. 5 minutes 180 W / 300 VA load app. 2…3 minutes
Interface	DSUB 9-pole for UPS management software
Safety / EMC	CE
Operating temperature	0…40 °C
Storage temperature	0…40 °C
Dimensions	146 x 41.5 x 248 mm ±0.8 mm
Weight (net)	2.75 kg

Product specific data	
Type of battery	2 x 6 V / 3 Ah, maintenance-free lead batteries (VRLA)
Noise development	<35 dbA
Load sensor	Switch off at <20 Watt
Status display	Mains mode: LED green Back-up mode: LED yellow Battery low: LED red Overtemperature: LED red
Acoustic alarms	Power failure, every 5 seconds Battery low, every second
Test function	Test button at the front panel to check UPS function
Optionally available	▪ UPS management software „RUPS 2000 OEM": WIN 3.X, 95, 98, NT, ME, 2000, 2003, XP, Vista, 7, Novell NetWare®, OS/2, UNIX, LINUX, others on request ▪ IUPS-301, 300 VA, 110 VAC, 60Hz

During storage the IUPS-301 has to be charged every 6 months.

IUPS-501

500 VA

- **Integrated UPS**
- **Communications interface**
- **Temperature controlled**

Other than conventional uninterruptable power supplies the IUPS-501 was designed to be installed into a PC. Thus, UPS and PC become one compact space-saving unit. The IUPS-501 as well as the additional battery pack can easily be installed into a drive slot and its handling is exceptionally user-friendly. Via interface and the UPS management software "RUPS 2000 OEM" the computer will be shut down and switched off in case of mains power failure.

Technical data

Output power	500 VA / 300 W with additional battery
Input voltage	230 V AC ±15 %
Input frequency	50 Hz ±5 %
Output voltage	230 V AC ±15 %
Output frequency	50 Hz ±1 %
Charging time	10…12 h
UPS Classification / Wave form	VFD / rectangular
Power factor	0.6
Overload protection	UPS mode: switch off / mains mode: fuse
Transfer time	<4 ms
Back up time	100 W / 166 VA load app. 24 minutes 300 W / 500 VA load app. 4 minutes
Interface	DSUB 9-pole for UPS management software
Safety / EMC	CE
Operating temperature	0…+40 °C
Storage temperature	0…+40 °C
Dimensions	41.5 x 146 x 248 mm ±0.8 mm, additional battery 39 x 146 x 203 mm ±0.8 mm
Weight (net)	2.75 kg, additional battery 2.55 kg

Product specific data

Type of battery	2 x 6 V / 3 Ah and 12 V / 2.2 Ah maintenance-free lead batteries (VRLA)
Noise development	<35 dbA
Load sensor	Switch off at <20 Watt
Status display	Mains mode: LED green Back-up mode: LED yellow Battery low: LED red Overtemperature: LED red
Acoustic alarms	Power failure, every 5 seconds Battery low, every second
Test function	Test button at the front panel to check UPS function
Optionally available	UPS management software „RUPS 2000 OEM": WIN 3.X, 95, 98, NT, ME, 2000, 2003, XP, Vista, 7, Novell NetWare®, OS/2, UNIX, LINUX, others on request

During storage the IUPS-501 has to be charged every 6 months.

IUPS-300K

300 VA

- **Integrated UPS**
- **Short design**
- **Communications interface**

Other than conventional uninterruptable power supplies the IUPS-300K was designed to be installed into a PC. Thus, UPS and PC become one compact space-saving unit. The IUPS-300K can easily be installed into a drive slot and its handling is exceptionally user-friendly. Via interface and the UPS management software "RUPS 2000 OEM" the computer will be shut down and switched off in case of mains power failure.

Technical data

Output power	300 VA / 180 W
Input voltage	230 V AC ±15 %
Input frequency	50 Hz ±5 %
Output voltage	230 V AC ±5 %
Output frequency	50 Hz ±3 %
Charging time	6…8 h
UPS Classification / Wave form	VFD / rectangular
Power factor	0.6
Overload protection	UPS mode: switch off / mains mode: fuse
Transfer time	<4 ms
Back up time	100 W / 166 VA load app. 5 minutes 180 W / 300 VA load app. 2 minutes
Interface	DSUB 9-pole for UPS management software
Safety / EMC	CE
Operating temperature	0…40 °C
Storage temperature	0…40 °C
Dimensions	41.5 x 146 x 207 mm ±0.8 mm
Weight (net)	2 kg

Product specific data

Type of battery	12 V / 2.2 Ah maintenance-free lead-acid batteries (VRLA)
Noise development	<40 dbA
Load sensor	Switch off at <20 Watt
Status display	Mains mode: LED green Back-up mode: LED yellow Battery low: LED red Overtemperature: LED red
Acoustic alarms	Power failure, every 5 seconds Battery low, every second
Test function	Test button at the front panel to check UPS function
Optionally available	▪ UPS management software „RUPS 2000 OEM": WIN 3.X, 95, 98, NT, ME, 2000, 2003, XP, Vista, 7, Novell NetWare®, OS/2, UNIX, LINUX, others on request ▪ IUPS-300K, 300 VA, 110 VAC, 60 Hz

During storage the IUPS-300K has to be charged at least every 6 months.

Our portfolio includes UPS units made by Riello as well. A selection of them is listed on this page.

You did not find what you were looking for? Please do not hesitate to contact us!
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We will be glad to send you a new Riello catalogue!

iPlug

Output power
600–800 VA / 360–480 W
Chassis
Box
UPS Technology
Off-Line / VFD
Form of output voltage
Rectangular

Win Dialog Plus (WD/WP)

Output power
400–800 VA / 240–480 W
Chassis
Mini-Tower
UPS Technology
Line Interactive / VI
Form of output voltage
Rectangular

iDialog (ID)

Output power
400–1600 VA / 240–960 W
Chassis
Mini-Tower
UPS Technology
Off-Line / VFD
Form of output voltage
Rectangular

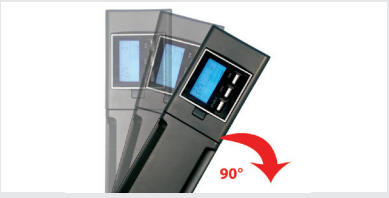
Dialog Vision (DVT)

Output power
500–2000 VA / 350–1350 W
Chassis
Tower
UPS Technology
Line Interactive / VI
Form of output voltage
Sine wave

Dialog Vision (DVR)

Output power
500–3000 VA / 350–2100 W
Chassis
Rack
UPS Technology
Line Interactive / VI
Form of output voltage
Sine wave

Dialog Vision (DVD)



Output power
1500–3000 VA / 1050–2100 W
Chassis
Tower Rack
UPS Technology
Line Interactive / VI
Form of output voltage
Sine wave

Premium Pro (PRP)

Output power
700–3000 VA / 560–2400 W
Chassis
Tower
UPS Technology
On-Line / VFI
Form of output voltage
Sine wave

Dialog Plus Rack (DLPR)

Output power
700–3000 VA / 490–2100 W
Chassis
Rack
UPS Technology
On-Line / VFI
Form of output voltage
Sine wave

Dialog Dual (DLD)

Output power
3300–10000 VA / 2300–8000 W
Chassis
Tower / Rack
UPS Technology
On-Line / VFI
Form of output voltage
Sine wave